

Kansas Agricultural Experiment Station Research Reports

Volume 0
Issue 1 *Cattleman's Day (1993-2014)*

Article 1131

1983

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Recommended Citation

Spire, M.F.; Riley, Jack G.; and Edwards, A.J. (1983) "Revaccination of recently processed cattle," *Kansas Agricultural Experiment Station Research Reports*: Vol. 0: Iss. 1. <https://doi.org/10.4148/2378-5977.2534>

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Revaccination of Recently Processed Cattle

M.F. Spire, J.G. Riley, and A.J. Edwards

Summary

Two trials were conducted to evaluate the effectiveness of revaccinating recently processed cattle with modified live IBR and BVD vaccine. Revaccination decreased total illness 24 to 26%. A significant reduction in clinically sick calves occurred by 48 hours after revaccination and continued for the remainder of the observation period.

Introduction

Out of a total of 495,000 cattle received by Kansas and Nebraska feedlots (Figure 27.1) consulted by the KSU College of Veterinary Medicine 8 to 9% were treated for illness; respiratory diseases accounted for 66 to 78% of that illness. Of 758 head of yearling cattle entering six feedlots, 73% (range 94 to 57%) were susceptible to IBR virus, and 36% (range 7 to 41%) were susceptible to BVD virus.

Thus, respiratory diseases and the varying susceptibility to IBR and BVD in incoming cattle place considerable burden on the producer and his veterinarian. We evaluated the effectiveness of revaccinating recently processed cattle with modified live IBR and BVD on sickness levels and death loss.

Experimental Procedures

The first 28-day trial evaluated the effectiveness of revaccination 10 days after initial processing in mixed calves weighing less than 550 lbs. At processing, 360 calves were given modified live IBR-BVD^a vaccine, multicomponent Clostridial bacterin/toxoid,^b implanted, ear tagged for identification, dipped, and half selected to be revaccinated with IBR/BVD 10 days later.

The second 28-day trial evaluated the effectiveness of revaccination at 5 days after initial processing in mixed calves weighing less than 450 lbs, purchased in a local salebarn. All cattle were in-processed 24 hours after arrival as in Trial 1, except they were not implanted nor dipped. Five days later, half were revaccinated as in trial 1.

^aResbo IBR-BVD, Norden Laboratories, Inc., Lincoln, NE 68501.

^bSitegard ML, Jensen-Salsbery Laboratories, Kansas City, MO 64141.

Animals were defined as being sick, based on one or a combination of the following clinical signs: depressed, gaunt, off feed, increased respiratory rate, heavy nasal or ocular discharge, diarrhea, and/or a temperature above 103.0°F. All cattle were treated a minimum of 4 days and returned to their original group.

Results and Discussion

Sickness levels and death loss for trial 1 are shown in Table 27.1. Although illness level and death loss tended to be lower in revaccinated cattle, the differences were not statistically significant.

The results of trial 2 are shown in Table 27.2. Although sickness level was 26% lower in revaccinated cattle, the difference was not statistically significant. However, revaccination significantly reduced the number of calves treated later than two days after revaccination (7 days after processing), and the number of calves that had to be retreated.

Table 27.1. Effects of Revaccination with Modified Live Virus Infectious Bovine Rhinotracheitis (IBR) and Bovine Viral Diarrhea (BVD) Vaccine 10 Days after Initial Processing in Feedlot Cattle Weighing Less than 550 lbs

	Normal processing	Revaccination 10 days after initial processing
Total head	180	180
Sickness level (%)	11.7	8.9
Death loss (%)	1.7	0.6

No significant differences ($P>.05$).

Table 27.2. Effects of Revaccinating with Modified Live Virus Infectious Bovine Rhinotracheitis (IBR) and Bovine Viral Diarrhea (BVD) Vaccine 5 Days After Initial Processing in Feedlot Cattle Weighing Less Than 450 lbs

	Normal processing	Revaccination 5 days after initial processing
Total head	64	65
Sickness level (%)	48.4	35.3
Death loss (hd)	1	0
Number of calves treated after revaccination	10	4
Number of calves treated more than 2 days after revaccination	8 ^a	1 ^b
Retreatment	6 ^c	1 ^d

^{ab} Means in same row with different superscripts are different ($P<.025$).

^{cd} Means in same row with different superscripts are different ($P<.05$).

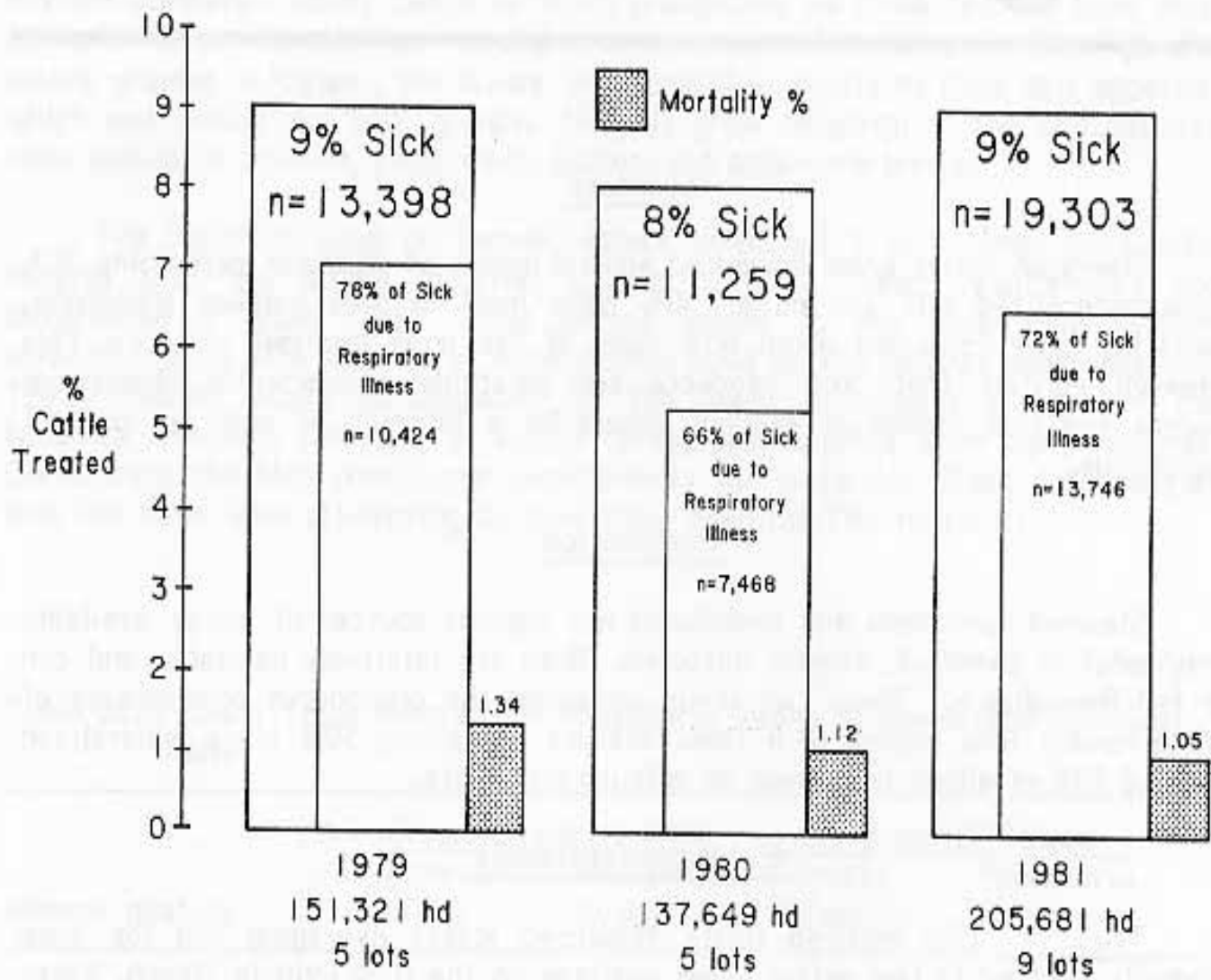


Figure 27.1 Incidence of feedlot disease in feedlots on routine health programs (1979-1981) consulted by the College of Veterinary Medicine, Kansas State University.